

REMARKS

1. Reconsideration in view of the amendments, the submissions, and comments herein is respectfully requested.

2. The specification has been amended to correct two obvious errors.

A. At the paragraph beginning at page 11, line 5 and ending with equation (4) at page 11, line 21 (paragraph 0075 of the USPTO printed application), the last line containing the formula has been amended to correct the error where "H" and the "+" sign are missing from the right side of the equation. The expression " rHR_3N^+ " when carried to the right side of the equation should have been " $(HR_3N^+)_r$ ". The incorrect portion within the parenthesis is readily apparent.

B. In addition, there is an error in the equation at page 12, line 16, where the expression for the tertiary amine " NR_3 " when carried to the right side of the equation should have read " $NR_3H^+HCrO_4^-$ ". The "R" appears to have been inadvertently changed to an "H" and is thus a typographical error.

It is respectfully submitted that the corrections for the above two errors are obvious.

3. Corrected drawings that are believed to be in compliance with 37 CFR 1.21(d) are submitted as an attachment hereto.

4. Claims 1 – 31 are currently pending in the application. Claims 1 - 31 stand rejected.

5. Claim 19 that was rejected for indefiniteness has been cancelled.

6. Claims 1, 3, 4, 11-15, and 17-31 stand rejected under 35 USC 102(e) as being anticipated by Delmas et al patent US 6,267,936 (hereafter Delmas).

Claim 1 has been amended to overcome the rejection. The claim has been amended to more clearly define the invention over the cited art.

A. Claim 1 now recites in the preamble and body of the claim that the process provides for the "simultaneous" extraction of "metal anionic and cationic species".

Antecedent is found at page 5, lines 15 to 22;

B. The time limitation of 0.1 – 10 minutes is found at page 12 line 8;

C. Antecedent for the formula for the tertiary amine is found in cancelled Claim 13 and in the specification at page 14, lines 6 to 11;

D. The limitation "at a pH where metal ions of the cationic species are hydrolyzed" is found at page 10, line 19;

E. The limitation "coagulate into molecular or submicroscopic clusters, and/or colloids having negative charges, and the anionic species and the molecular or submicroscopic clusters, or colloids have negative charges" is found at page 11, lines 1 to 7.

F. The diluent and modifier have been deleted as these are optional as recited in page 8, line 3 that "typical" formulations contain these.

It is respectfully submitted that amended Claim 1 traverses the ground for rejection. The claim now provides for the simultaneous removal of anions and cations using an amine that is a tertiary amine having straight chain or branched hydrocarbon, as recited by the formula. This is clearly different from Delmas where at least one arm of an extractant amine must be a phosphonic acid group (see Delmas particularly formulas I, Ia, and II and discussion at columns 1 through 7).

Language concerning the formation of colloids has been inserted. Submitted

herewith is the declaration of Bruce Monzyk with regard to the absence of colloids in the Delmas patent.

7. Claims 2-13, 15-17, 19-21, 25-26, and 30-31 have been cancelled.

Claims rejected on the basis of Delmas and Hein, specifically claims 2, 5-10, and 16 have been deleted.

8. The following amendments have been made to the original claims:

Claim 14 has been amended to specify the anionic and cationic species of chromium. Antecedent is at page 6, lines 16-17. The claim is dependent on claim 1 and should be patentable since it specifies the species simultaneously removed. Alternatively it should be patentable as a claim dependent on an allowable claim as discussed earlier.

Claim 18 is an original claim and should be patentable as a claim dependent on an allowable claim as discussed earlier.

Claims 22 to 24 are original claims that should be patentable as claims dependent on an allowable claim as discussed earlier.

Claim 27 has been amended by limiting the claim to a mixer for the contacting. The claim is dependent on and further limits an allowable claim as discussed above.

Claim 28 has been amended to depend on Claim 1 and provide further limitations thereto. The claim provides unique features not found in the prior art and is also dependent on an allowable claim as discussed earlier.

Claim 29 has been amended to depend on Claim 1 and provide further limitations thereto. The claim provides unique features not found in the prior art and is also dependent on an allowable claim as discussed earlier.

9. New claims 32 to 42 have been added as follows:

New Claim 32 adds a diluent limitation that was deleted from claim 1. Antecedent is in original claim 1 and at page 14, lines 16-17. The claim is dependent on and further limits an allowable claim as discussed above.

New Claim 33 lists specific diluents for limiting claim 32. Antecedent for the

claim is at page 14, lines 22-26. This claim should also be patentable as it is dependent on an allowable claim as discussed above.

New Claim 34 further limits the diluent of claim 32 and its antecedent is former claim 25.

New Claim 35 provides for a modifier and antecedent is found at page 14, lines 27-31.

New Claim 36 further limits the modifier of Claim 35. Antecedent is found at page 14, lines 27-31.

New Claim 37 further limits the modifier of Claim 35. Antecedent is in former Claim 26.

New Claim 38 further limits the contacting time of Claim 1. Antecedent is found at page 12, lines 8-9.

New Claim 39 further limits the contacting time for Claim 39. Antecedent is found at page 12, lines 8-9.

New Claim 40 further limits the anion species of Claim 1 to an oxometal ion. Antecedent is at page 6, line 17.

New Claim 41 further limits claim 1 by specifying the metal anions and cations. Antecedent is found at page 1, lines 26 – 30. Antecedent for trivalent iron is found at page 10, lines 26-27.

New Claim 42 further limits Claim 1 by specifying that the dilute aqueous solution have less than 200 ppm of metal ion. Antecedent is found at page 6, lines 22-23.

New Claim 43 further limits Claim 1 by specifying the tertiary amine used for extraction. Antecedent is found at page 14, lines 9-10.


All of the new claims provide further limitations on Claim 1 or on claims dependent on Claim 1. Since Claim 1 appears to be allowable and patentable, its dependent claims should likewise be allowable.

10. Applicant has petitioned for an extension of time of one month. The present date July 11, 2005 falls within the first month since the due date of July 9, 2005 is on a Saturday, and the present date is the next following business day. The fee of \$120

for the one month extension is enclosed herewith.

Applicant's attorney has made a good faith effort to address the concerns expressed by the Examiner. If the Examiner has any remaining issues with the amendment or application, and has any suggestions as to how to address them, the Examiner is invited to call the Applicant's undersigned attorney at the phone number given below, so that those issues can be worked out.

Respectfully submitted,



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